

Clearwater National Forest

Fish Habitat Report - Detailed Reach Summaries

Stream Name: **Blakes Fork**

HUC Code: **1706010801030301**

Survey Year: **1998**

Transect Spacing: **30**

Survey Length: **4290**

<i>Reach</i>	<i>Length</i>	<i>% of Channel Gradient</i>	<i># Transects</i>	<i>Channel Type</i>	
bf-01	840	19.6%	1.6	28	G4

Variable	Avg	Sum	Min	Max
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Channel Characteristics

Average Stream Depth (cm)	11.2		1.3	41.8
Maximum Depth (cm)	19.5		3	66
Stream Width (m):	1.01			
Bank Erosion (m/km)		166.1		
Bank Stability %	83.39%			
% Gradient (transects):	1.8			

Habitat Characteristics

Pool Quality Rating:	1.92		1	4
Pool Width (m):	1.4		0.6	2.3
Instream Cover Index	3.43		1	5
Bank Stability Index	3.57		2	5
Bank Cover Index	3.29		1	5
Acting Debris (no./100m)	3.1		0.0	10.0
Large Woody Debris (no./100m)	0.1		0.0	3.3
Potential Debris(no./100 m)	15.8		0.0	56.0
Primary Pools (no./km)	33.3		33.33	
High Quality Pools (no./km)				
Residual Pool Depth (cm)	39.1		24	66
Sum Surface Area (Pool Type)	666			
% Pool (all Pool like types):	78.7%			

All pool like types include large pools, pocketwater, alcoves, runs and pool-runs. Refer to the Habitat Type breakdowns for the % of actual primary pools

Pacfish Averages for wood and pools	Avg	Min	Max
Acting Debris (no./mile)	49.8	0.0	160.9
Large Woody Debris (no./mile)	1.9	0.0	53.6
Primary Pools (no./mile)	53.6		
High Quality Pools (no./mile)			

Cobble Embeddedness

	Cobble Embeddedness	Adjusted Cobble Embeddedness
alcove	0.0	0.0
pocketwater	10.0	10.9
pool	53.1	57.2
riffle	52.5	55.5
run pool	26.0	28.4
run riffle	12.5	13.6
Average Reach CE (unweighted)	34.5	37.2

Habitat types - Average Widths (meters)

Variables	Mean	Min	Max	Surface Area (m2)	Percentage of Total
pool	1.4	0.6	2.3	543	64.2%
riffle	0.5	0.2	0.8	30	3.5%
pocketwater	0.8	0.8	0.8	24	2.8%
alcove	0.2	0.2	0.2	6	0.7%
run riffle	0.6	0.4	1.0	150	17.7%
run pool	0.6	0.2	0.9	93	11.0%
Total Surface Area (m2)				846	100.0%

Primary Habitat Functions - average widths

Variables	Mean	Min	Max	Surface Area	Percentage of Total
unusable	0.5	0.2	0.8	30	3.5%
summer rearing	1.0	0.2	2.3	741	87.6%
winter rearing	1.3	0.6	1.9	75	8.9%
Total Surface Area (m2):				846	100.0%

Spawning Habitat Subreport (square Meters)

Spawning habitat totals for Blakes Fork, bf-01

		Sum	% of Total
Steelhead (spring)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Chinook (fall)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Resident (spring)	Good	1	0.12%
	Fair	3	0.35%
	Poor	7	0.83%
	Total:	11.0	2.01%
Resident (fall)	Good	1	0.12%
	Fair	3	0.35%
	Poor	7	0.83%
	Total:	11.0	2.01%

Predominant Substrates

Predominant Substrate	Surface Area (square meters)	% of Total Area
small rubble (cobble) 7.6-15.2 cm	99	11.7
coarse gravel 2.5-7.6 cm	294	34.8
small gravel 0.6-2.6 cm	195	23.0
sand <0.6 cm	111	13.1
silt	147	17.4
Total Surface Area	846	

Pool Creators

Pool Creators	Percentage of Total Pool Area in Stratum	Mean Pool Rating
— not in list	11.5	0.00
large woody debris	22.1	4.67
meanders	66.4	5.00
All Pools	100.0	3.5

Pool Ratings

Habitat Type	Average Pool Rating	Min	Max
pool	1.92	1	4
Average Pool Rating (all pool types)	1.92	1	4

Riparian Vegetation

Riparian Dominant/Subdominant Combinations		% of Scheme within the reach
Dominant	Subdominant	
Alder	and Dogwood	57.1%
Dogwood	and Cedar	3.6%
Mixed Shrubs	and Cedar	3.6%
Forbs/Grasses (not meadow)	and Alder	21.4%
Cedar	and Dogwood	10.7%
Mixed Conifer	and Alder	3.6%

<i>Reach</i>	<i>Length</i>	<i>% of Channel Gradient</i>	<i># Transects</i>	<i>Channel Type</i>	
bf-02	1410	32.9%	1.5	47	C4

Variable	Avg	Sum	Min	Max
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Channel Characteristics

Average Stream Depth (cm)	9.9		0.8	37.3
Maximum Depth (cm)	19.4		2	73
Stream Width (m):	1.38			
Bank Erosion (m/km)		394.7		
Bank Stability %	60.53%			
% Gradient (transects):	1.7			

Habitat Characteristics

Pool Quality Rating:	2.76		1	4
Pool Width (m):	1.8		0.8	2.9
Instream Cover Index	2.74		1	5
Bank Stability Index	1.60		1	3
Bank Cover Index	3.00		1	5
Acting Debris (no./100m)	15.4		0.0	310.0
Large Woody Debris (no./100m)	1.5		0.0	6.7
Potential Debris(no./100 m)	89.8		28.0	140.0
Primary Pools (no./km)	36.2		36.17	
High Quality Pools (no./km)				
Residual Pool Depth (cm)	44.4		28	81
Sum Surface Area (Pool Type)	1701			
% Pool (all Pool like types):	87.4%			

All pool like types include large pools, pocketwater, alcoves, runs and pool-runs. Refer to the Habitat Type breakdowns for the % of actual primary pools

Pacfish Averages for wood and pools	Avg	Min	Max
Acting Debris (no./mile)	247.6	0.0	4987.9
Large Woody Debris (no./mile)	24.0	0.0	107.3
Primary Pools (no./mile)	58.2		
High Quality Pools (no./mile)			

Cobble Embeddedness

	Cobble Embeddedness	Adjusted Cobble Embeddedness
pool	65.9	65.7
riffle	21.7	21.6
run pool	30.0	29.9
run riffle	42.0	41.9
Average Reach CE (unweighted)	52.3	52.2

Habitat types - Average Widths (meters)

Variables	Mean	Min	Max	Surface Area (m2)	Percentage of Total
pool	1.7	0.8	2.9	1488	76.4%
riffle	0.9	0.6	0.9	153	7.9%
run riffle	0.6	0.5	0.9	93	4.8%
run pool	1.0	0.7	1.5	213	10.9%
Total Surface Area (m2)				1947	100.0%

Primary Habitat Functions - average widths

Variables	Mean	Min	Max	Surface Area	Percentage of Total
unusable	0.9	0.9	0.9	54	2.8%
summer rearing	1.3	0.5	2.9	1632	83.8%
winter rearing	2.2	1.8	2.6	261	13.4%
Total Surface Area (m2):				1947	100.0%

Spawning Habitat Subreport (square Meters)

Spawning habitat totals for Blakes Fork, bf-02

		Sum	% of Total
Steelhead (spring)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Chinook (fall)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Resident (spring)	Good	0	0.00%
	Fair	28	1.44%
	Poor	7	0.36%
	Total:	35.0	2.16%
Resident (fall)	Good	0	0.00%
	Fair	28	1.44%
	Poor	7	0.36%
	Total:	35.0	2.16%

Predominant Substrates

Predominant Substrate	Surface Area (square meters)	% of Total Area
coarse gravel 2.5-7.6 cm	456	23.4
small gravel 0.6-2.6 cm	963	49.5
sand <0.6 cm	306	15.7
silt	222	11.4
Total Surface Area	1947	

Pool Creators

Pool Creators	Percentage of Total Pool Area in Stratum	Mean Pool Rating
— not in list	19.0	0.00
large woody debris	21.6	2.75
meanders	59.3	4.50
All Pools	100.0	2.5

Pool Ratings

Habitat Type	Average Pool Rating	Min	Max
pool	2.76	1	4
Average Pool Rating (all pool types)	2.76	1	4

Riparian Vegetation

Riparian Dominant/Subdominant Combinations		% of Scheme within the reach
Dominant	Subdominant	
Alder	and Cedar	6.4%
Dogwood	and Grand fir	4.3%
Mixed Shrubs	and Cedar	2.1%
Cedar	and Alder	70.2%
Grand fir	and Cedar	14.9%
Mixed Conifer	and Cedar	2.1%

<i>Reach</i>	<i>Length</i>	<i>% of Channel Gradient</i>	<i># Transects</i>	<i>Channel Type</i>
bf-03	2040	47.6%	3.9	68
				C4b

Variable	Avg	Sum	Min	Max
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Channel Characteristics

Average Stream Depth (cm)	6.0		1.0	20.8
Maximum Depth (cm)	11.6		2	42
Stream Width (m):	1.07			
Bank Erosion (m/km)		266.9		
Bank Stability %	73.31%			
% Gradient (transects):	3.9			

Habitat Characteristics

Pool Quality Rating:	2.63		0	4
Pool Width (m):	1.3		0.5	2.2
Instream Cover Index	1.94		1	5
Bank Stability Index	2.56		1	4
Bank Cover Index	1.91		1	5
Acting Debris (no./100m)	13.7		0.0	26.7
Large Woody Debris (no./100m)	1.4		0.0	6.7
Potential Debris(no./100 m)	90.8		14.0	140.0
Primary Pools (no./km)	18.6		18.63	
High Quality Pools (no./km)	0.0			
Residual Pool Depth (cm)	34.7		23	52
Sum Surface Area (Pool Type)	1587			
% Pool (all Pool like types):	73.7%			

All pool like types include large pools, pocketwater, alcoves, runs and pool-runs. Refer to the Habitat Type breakdowns for the % of actual primary pools

Pacfish Averages for wood and pools	Avg	Min	Max
Acting Debris (no./mile)	220.1	0.0	429.1
Large Woody Debris (no./mile)	22.9	0.0	107.3
Primary Pools (no./mile)	30.0		
High Quality Pools (no./mile)	0.0		

Cobble Embeddedness

	Cobble Embeddedness	Adjusted Cobble Embeddedness
pool	69.6	70.0
riffle	13.3	13.5
run pool	52.2	52.4
run riffle	55.0	55.5
Average Reach CE (unweighted)	50.8	51.1

Habitat types - Average Widths (meters)

Variables	Mean	Min	Max	Surface Area (m2)	Percentage of Total
pool	1.3	0.5	2.2	1059	49.2%
riffle	0.9	0.3	1.6	399	18.5%
run riffle	0.9	0.5	2.0	168	7.8%
run pool	0.8	0.4	1.2	528	24.5%
Total Surface Area (m2)				2154	100.0%

Primary Habitat Functions - average widths

Variables	Mean	Min	Max	Surface Area	Percentage of Total
unusable	0.7	0.3	1.2	129	6.0%
summer rearing	1.0	0.4	2.2	1941	90.1%
winter rearing	2.0	2.0	2.0	60	2.8%
spawning habitat	0.8	0.8	0.8	24	1.1%
Total Surface Area (m2):				2154	100.0%

Spawning Habitat Subreport (square Meters)

Spawning habitat totals for Blakes Fork, bf-03

		Sum	% of Total
Steelhead (spring)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Chinook (fall)	Good	0	0.00%
	Fair	0	0.00%
	Poor	0	0.00%
	Total:	0.0	0.00%
Resident (spring)	Good	4	0.19%
	Fair	6	0.28%
	Poor	13	0.60%
	Total:	23.0	1.49%
Resident (fall)	Good	4	0.19%
	Fair	6	0.28%
	Poor	13	0.60%
	Total:	23.0	1.49%

Predominant Substrates

Predominant Substrate	Surface Area (square meters)	% of Total Area
small rubble (cobble) 7.6-15.2 cm	96	4.5
coarse gravel 2.5-7.6 cm	888	41.2
small gravel 0.6-2.6 cm	291	13.5
sand <0.6 cm	336	15.6
silt	543	25.2
Total Surface Area	2154	

Pool Creators

Pool Creators	Percentage of Total Pool Area in Stratum	Mean Pool Rating
— not in list	50.0	0.00
large woody debris	23.0	2.63
boulders / bedrock	2.2	2.00
meanders	24.8	3.00
All Pools	100.0	1.6

Pool Ratings

Habitat Type	Average Pool Rating	Min	Max
pool	2.63	0	4
Average Pool Rating (all pool types)	2.63	0	4

Riparian Vegetation

Riparian Dominant/Subdominant Combinations		% of Scheme within the reach
Dominant	Subdominant	
Alder	and Grand fir	5.9%
Mixed Shrubs	and Mixed Conifer	1.5%
Cedar	and Alder	41.2%
Grand fir	and Alder	29.4%
Mixed Conifer	and Maple	22.1%